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| APPLICATION NO.                            | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/660,143                                 | 09/11/2003  | Steven W. Githens    | ROC920030276US1     | 4972             |
| 46797                                      | 7590        | 04/03/2007           | EXAMINER            |                  |
| IBM CORPORATION, INTELLECTUAL PROPERTY LAW |             |                      | NUNEZ, JORDANY      |                  |
| DEPT 917, BLDG. 006-1                      |             |                      | ART UNIT            |                  |
| 3605 HIGHWAY 52 NORTH                      |             |                      | PAPER NUMBER        |                  |
| ROCHESTER, MN 55901-7829                   |             |                      | 2179                |                  |
| SHORTENED STATUTORY PERIOD OF RESPONSE     | MAIL DATE   |                      | DELIVERY MODE       |                  |
| 3 MONTHS                                   | 04/03/2007  |                      | PAPER               |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/660,143             | GITHENS ET AL.      |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Jordany Núñez          | 2179                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 11 September 2003.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-47 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-47 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \*    c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

|   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-47 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: production of a useful, tangible, and concrete result (figure 5, element 580, and corresponding text). Examiner reads "generating [...] a concrete data structure" as the final result produced by the claimed invention. The term "generating" has multiple definitions, including "formulating" and "bringing into existence." While "bringing into existence" is considered to be a tangible result which enables any usefulness of what was generated to be realized, "formulating" is believed to be an abstract manipulation, failing to enable any usefulness of what was generated to be realized. Figure 5, element 570, and its corresponding text are believed to be the most relevant disclosure regarding what is meant by "generating" in the claim. Since these attribute purely mathematical data manipulations to the generating of the result, one of ordinary skill would consider "formulating" the broadest reasonable definition of the term "generating" as used in claim 1-47. As such, claims 1-47 are not believed to be producing a tangible result which enables any usefulness of what was generated to be realized.

Claims 43-47 are further rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: enabling hardware. Claims 43-47 are directed to a computer. Figure 1, and page 13, paragraph [0041], are stated in the specification to be examples of the components comprised by computers. Therefore, one of ordinary skill in the art would not read the components recited in the specification to be inherently included with a computer. Further, none of the

claims recite any hardware components, and therefore one of ordinary skill in the art would reasonably conclude that only software components are to be read into the claims. Software, *per se*, is functional descriptive material, and lacks the necessary structural elements to support, even in its broadest reasonable sense, an "apparatus."

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 22-42 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 22-42 are directed to a computer readable medium. Page 13, paragraph [0041] states that a computer readable medium comprises "a communication medium [...] including wireless communications". A communication medium, as defined in the specification, is nonstatutory because it is not a process, machine, manufacture, or composition of matter.

Claims 43-47 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 43-47 are directed to a computer. Figure 1, and page 13, paragraph [0041], are stated in the specification to be examples of the components comprised by computers. Therefore, one of ordinary skill in the art would not read the components recited in the specification to be inherently included with a computer. Further, none of the claims recite any hardware components, and therefore one of ordinary skill in the art would reasonably conclude that only software components are to be read into the claims. Software, *per se*, is functional descriptive material, and lacks the necessary structural elements to support, even in its broadest reasonable sense, an "apparatus." Further, Software, *per se*, is nonstatutory because it is not a process, machine, manufacture, or composition of matter.

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Claims 1-47 are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility. None of the above claims produce either a transformation of a physical object, or a useful, tangible and concrete result. Examiner reads "generating [...] a concrete data structure" as the final result produced by the claimed invention. The term "generating" has multiple definitions, including "formulating" and "bringing into existence." While "bringing into existence" is considered to be a tangible result which enables any usefulness of what was generated to be realized, "formulating" is believed to be an abstract manipulation, failing to enable any usefulness of what was generated to be realized. Figure 5, element 570, and its corresponding text are believed to be the most relevant disclosure regarding what is meant by "generating" in the claim. Since these attribute purely mathematical data manipulations to the generating of the result, one of ordinary skill would consider "formulating" the broadest reasonable definition of the term "generating" as used in claim 1-47. As such, claims 1-47 are not believed to be producing a tangible result which enables any usefulness of what was generated to be realized.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 11-16, 19-29, 32-37, 40-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Cox et al. (US20020156806, Cox).

As to claim 1, 2, 11, 19-21, Cox shows:

A method of generating a graphical representation of data, comprising:

receiving abstract attributes values comprising at least a selection of a requested graphical representation type for a selected data set (page 7, paragraph [0065], lines );

selecting an abstract data structure template (e.g., BarChart view object) from a plurality of abstract data structure templates, each being specific to a different graphical representation type and defining a plurality of template attributes for generically representing an abstract graphical representation in the respective different graphical representation type, wherein the selected abstract data structure template is specific to the selected graphical representation type (page 7, paragraph [0072], lines 19-23);

generating, on the basis of the received abstract attributes values and the selected abstract data structure template, an abstract data structure defining a plurality of abstract attributes abstractly representing the data set in the graphical representation (figure 5, element 510, and corresponding text);

selecting transformation rules (e.g., interaction desired programmed by author) for (Examiner reads the following as not positively recited) transforming the abstract data structure into a concrete data structure from a plurality of transformation rules, the transformation rules describing graphical attributes of the requested graphical representation type (page 5, paragraph [0044], lines 12-23);

and generating, on the basis of the abstract data structure, a concrete data structure defining a concrete graphical representation in a graphics rendering language using the transformation rules (figure 8, and corresponding description).

As to claim 3, 13, Cox shows:

The method of claim 2, wherein the requested graphical representation type is one of a bar chart, a line chart, a pie chart, a scatter plot and a combination thereof (figure 8, and corresponding description).

As to claim 4, 14, Cox shows:

The method of claim 2, wherein the plurality of abstract data structure templates is associated with a particular data source of the data (page 7, paragraph [0059]).

As to claim 5, Cox shows:

The method of claim 1, further comprising:

providing (e.g., making possible, but not necessarily causing) transformation rules for (Examiner reads the following as not positively recited) transforming the abstract data structure into the concrete data structure, the transformation rules describing graphical attributes of a requested graphical representation type (page 5, paragraph [0044], lines 12-23);

and generating the concrete data structure using the transformation rules (figure 8, and corresponding description).

As to claim 6, 15, Cox shows:

The method of claim 5, wherein generating the concrete data structure using the transformation rules comprises:

selecting a subset of the transformation rules in accordance with the requested graphical representation type (page 5, paragraph [0044], lines 12-23);

and generating the concrete data structure using the subset of the transformation rules (page 8, paragraph [0080], lines 6-19).

As to claim 7, Cox shows:

The method of claim 6, wherein the requested graphical representation type is one of a bar chart, a line chart, a pie chart, a scatter plot and a combination thereof (page 8, paragraph [0079], lines 8-12).

As to claim 8, 16, Cox shows:

The method of claim 1, wherein at least one of the abstract data structure and the concrete data structure is defined in Extensible Markup Language (XML) (page 4, paragraph [0036], lines 4-7, page 10, paragraph [0102], lines 1-8).

As to claim 12, Cox shows:

The method of claim 11, further comprising:

rendering the data set, as described in the graphics rendering language (e.g., java applets), in a graphic (figure 8, and corresponding description).

Claims 22-29, 32-37, 40-47 are rejected using the same line of reasoning used for the rejection of claim 1-8, 11-16, 19-21.

References to specific columns, figures or lines should not be limiting in any way. The entire reference provides disclosure related to the claimed invention.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 9, 10, 17, 18, 30, 31, 38, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox.

As to Claims 9, 10, 17, 18, 30, 31, 38, 39:

Cox shows a method substantially as claimed, as specified above.

Cox further shows: using java applets (page 3, paragraph [0023], lines 1-7), and it being apparent to those skilled in the art that various changes and modifications can be made which will achieve some of the advantages of the invention without departing from the spirit and scope of the invention and that other components performing the same functions may be suitably substituted (page 10, paragraph [0102], lines 1-8).

Cox fails to specifically show: the concrete data structure is defined in a vector-based graphics language, the vector-based graphics language is one of Vector Markup Language (VML), Scalable Vector Graphics (SVG), and Hypertext Markup Language (HTML) Image Maps.

It would have been obvious to one of ordinary skill in the art, having the teachings of Cox at the time that the invention was made, to have replaced the java applets of Cox with the at least vector-based graphics language being one of Vector Markup Language (VML), Scalable Vector Graphics (SVG), and Hypertext Markup Language (HTML) Image Maps.

One would have been motivated to make such combination because features like scripting being done on XHTML and SVG elements simultaneously within the same Web page would have been obtained and desired.

References to specific columns, figures or lines should not be limiting in any way. The entire reference provides disclosure related to the claimed invention.

#### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

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|                  |                    |
|------------------|--------------------|
| Dettinger et al. | [U.S. 7085757]     |
| Lennon et al.    | [U.S. 20040015783] |
| Vedula et al.    | [U.S. 6823495]     |
| Miyadi           | [U.S. 7009609]     |
| Chen et al.      | [U.S. 6668354]     |
| Makita           | [U.S. 5611034]     |

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordany Núñez whose telephone number is (571)272-2753. The examiner can normally be reached on Monday Through Friday 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on (571)272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JN  
3/10/2007

  
WEILUN LO  
SUPERVISORY PATENT EXAMINER